

CLEAN VERSION OF THE CLAIMS

26. (Allowed) A method for improving the efficiency of *in vivo* liver cell retroviral transduction, the method comprising, inducing a semi-synchronous wave of *in vivo* liver cell proliferation by concurrently administering tri-iodothyronine (T3) and keratinocyte growth factor (KGF), and further comprising administering to the liver a retroviral vector complexed with cationic liposomes subsequent to the induction of liver cell proliferation, thereby increasing transduction efficiency.

27. (Allowed) The method of claim 26, the cationic liposome comprising DiOctadecylamidoGlycylSpermine (DOGS).

28. (Twice Amended) A method of treating diseases directly affecting liver function comprising:

inducing a semi-synchronous wave of liver cell proliferation by concurrently contacting the liver cells with tri-iodothyronine (T3) and keratinocyte growth factor (KGF);

contacting the liver cells with a retroviral vector containing a nucleic acid that encodes a RNA, protein or polypeptide to be expressed;

and expressing the RNA, protein or polypeptide.

29. The method of claim 28, wherein the liver cell proliferation is induced *in vitro*.

30. The method of claim 28, wherein the liver cell proliferation is induced *in vivo*.

31. The method of claim 28, wherein the RNA is ribozymal RNA.

32. The method of claim 28, wherein said RNA is anti-sense RNA.

33. The method of claim 28, wherein the nucleic acid comprises DNA.

34. The method of claim 28, wherein the nucleic acid comprises RNA.

35. (Twice Amended) A method of treating diseases directly affecting liver function comprising:

the administration of a composition comprising an effective amount of tri-iodothyronine (T3) and an effective amount of keratinocyte growth factor (KGF), wherein the composition is in an effective amount that induces a semi-synchronous wave of liver cell proliferation upon administration *in vivo* in a subject;

further comprising administering to the liver, subsequent to the liver cell proliferation, a retroviral vector containing a nucleic acid that encodes a RNA, protein or polypeptide to be expressed, wherein expression of the RNA, protein or polypeptide will treat a condition; and expressing the RNA, protein or polypeptide, thereby treating the condition.

36. The method of claim 35 wherein the effective amount of T3 is ranging from about 400 µg per kg of body weight of the subject to about 40 mg per kg of body weight of the subject.

37. The method of claim 36, wherein the effective amount of T3 is about 4 mg per kg of body weight of the subject.

38. The method of claim 35, wherein the effective amount of KGF is ranging from about 100 µg per kg of body weight of the subject to about 10 mg per kg of body weight of the subject.

39. The method of claim 38, wherein the effective amount of KGF is about 1 mg per kg of body weight of the subject.

40. (Amended) The method of claim 35, wherein the effective amount of T3 and the effective amount of KGF is in a ratio of about 4:1.

41. The method of claim 40, wherein the effective amount of T3 is in a dose of about 4 mg per kg of body weight of the subject and the effective amount of KGF is in a dose of about 1 mg per kg of body weight of the subject.

42. The method of claim 41, wherein the composition is administered subcutaneously.
43. The method of claim 41, wherein the composition is administered intravenously.
44. The method of claim 41, wherein the composition is administered intramuscularly.
45. The method of claim 41, wherein the composition is administered intraperitoneally.
46. The method of claim 41, wherein the composition is administered directly into the liver.
47. (Amended) The method of claim 35, the retroviral complexed with a cationic liposome.
48. The method of claim 47, the cationic liposome comprising DiOctadecylamidoGlycylSpermine (DOGS).
49. (Amended) The method of claim 35 wherein the retroviral vector is administered between about 6 hours and 14 days after administration of the composition.
50. (Amended) The method of claim 35 wherein the retroviral vector is administered between about 24 hours and 8 days after administration of the composition.
51. (Twice Amended) A method for treating or preventing cirrhosis of the liver comprising concurrently administering to a subject an effective amount of T3 and an effective amount of KGF, thereby inducing a semi-synchronous wave of liver cell proliferation *in vivo*, and further comprising administering to a liver cell a retroviral vector complexed with cationic liposomes wherein the retroviral vector encodes HGF, which treats or prevents cirrhosis of the liver.